| Class Subclass   |                     |                             | ,                   |                 |                 |                      | PATENT NUMBE            |  |
|--|---------------------|-----------------------------|---------------------|-----------------|-----------------|----------------------|-------------------------|--|
|  |                     |                             | <u> </u>            |                 |                 |                      | <b>S</b> *.             |  |
| Class  | 000                 |                             |                     | •               |                 |                      |                         |  |
|  |                     | U.S. UTIL                   | ITY Patent          | Applica         | ation<br>PATENT | DATE                 | ·.                      |  |
| Ö  |                     | AKG<br>scanned G            | 10.1.P.E.           | TH.             | PAILM           |                      | Y.                      |  |
|  |                     |                             |                     |                 |                 |                      | <u> </u>                |  |
| APPLICATION NO.<br>- 09/779478                           | CONT/PRIO           | R CLASS<br>165              | SUBCLASS / 09.1,    | ART UNI         | 153             | EXAMINER<br>Lev      |                         |  |
| Toru Yama<br>Kazuki Ho                                   | guchi<br>osoya      | 1651                        | (181,177,           | /83             |                 |                      |                         |  |
| Heat exch  | nangers<br>uring th | and fin fo<br>ne same       | or heat ex          | change          | rs ard          | i methog             | is for                  |  |
| marior acco  | -                   |                             |                     |                 |                 |                      | PTO-20-<br>12/99        |  |
| مصمد د از در میکند.<br>ا                                 |                     |                             |                     |                 |                 |                      |                         |  |
|  |                     |                             |                     |                 |                 |                      | ·<br>                   |  |
|  |                     | ISSUIN                      | G CLASSII           | FICATION        | ON              |                      |                         |  |
| ORIGINAL   | ORIGINAL CROSS RE   |                             |                     |                 |                 |                      |                         |  |
| CLASS SUBCLASS   |                     | CLASS SUBCLASS (ONE         |                     |                 | NE SUBC         | LASS PER             | BLOCK)                  |  |
|  |                     |                             |                     |                 | <del> </del> -  | <u> </u>             |                         |  |
| INTERNATIONAL CL   | ASSIFICATION        | ON .                        |                     |                 | -               | <del>  `.</del>      | +                       |  |
|  | *.                  |                             |                     | <del> </del>    |                 | _                    | <u> </u>                |  |
|  |                     |                             |                     | 1               |                 |                      |                         |  |
|  |                     |                             |                     |                 |                 |                      |                         |  |
|  |                     |                             |                     |                 | Continue        | d on Issue Sli       | p Inside File Jacket    |  |
|  |                     |                             |                     |                 | <u>,</u>        |                      | ·                       |  |
| TERMINAL   |                     | DRAWINGS                    |                     |                 |                 |                      | MS ALLOWED              |  |
| L DISCLAIMER   | ,                   | Sheets Drwg.                | Figs. Drwg.         | Print Fig.      | · Tot           | al Claims            | Print Claim for C       |  |
| ☐ The term of this pater                                 | nt                  |                             |                     | ٠               | NO              | TICE OF AL           | LOWANCE MAILE           |  |
| subsequent to<br>has been disclaimed.                    | (date)              | (Assistant Examiner) (Date) |                     |                 | -               | •                    | · . ·                   |  |
| ☐ The term of this pate                                  | ent shall           |                             | •                   |                 | -               |                      |                         |  |
| not extend beyond the expiration date of U.S Patent. No. |                     |                             |                     |                 |                 | ISSUE FEE            |                         |  |
|  |                     |                             |                     |                 | An              | Amount Due Date Paid |                         |  |
|  |                     | (Primary                    | Examiner)           | (Date)          | -               |                      |                         |  |
|  |                     |                             |                     |                 |                 | ISSUE BA             | TCH NUMBER              |  |
| The terminal   | anthe of            |                             |                     |                 | - 1             |                      |                         |  |
| The terminalmo   | onths of sclaimed.  | (Legal Instrum              | ents Examiner)      | (Date)          | -   '           |                      |                         |  |
| this patent have been dis                                | sclaimed.           |                             | ents Examiner)      |                 | the Helical Co  | otos Code Title      | 35 Sections 122 181 or  |  |
| this patent have been dis                                | sclaimed.           | tricted Unauthorized        | disclosure may be o | prohibited by t | the United St   | ates Code Title      | 35, Sections 122, 181 a |  |

BEST AVAILABLE COPY